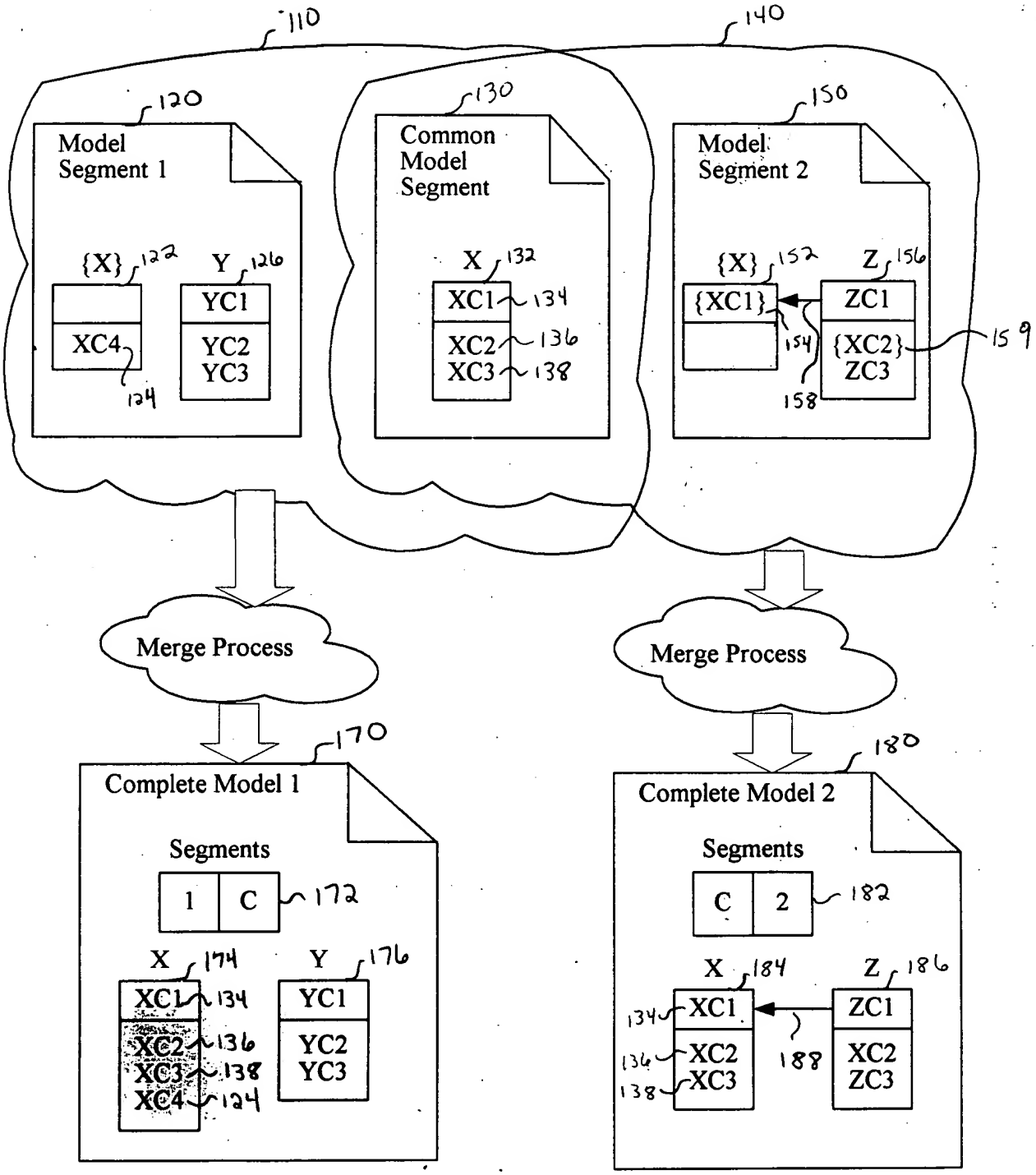

110
140
120
Model Segment 1
{X} 122
Y 126
YC1
XC4
YC2
YC3
124
130
Common Model Segment
X 132
XC1 134
XC2 136
XC3 138
150
Model Segment 2
{X} 152
Z 156
{XC1}
ZC1
154
{XC2}
ZC3
158
159
Merge Process
Merge Process
170
Complete Model 1
Segments
1
C
172
X 174
Y 176
XC1 134
XC2 136
XC3 138
XC4 124
YC1
YC2
YC3
180
Complete Model 2
Segments
C
2
182
X 184
Z 186
134
XC1
ZC1
188
136
XC2
XC2
ZC3
138
XC3

Figure 1

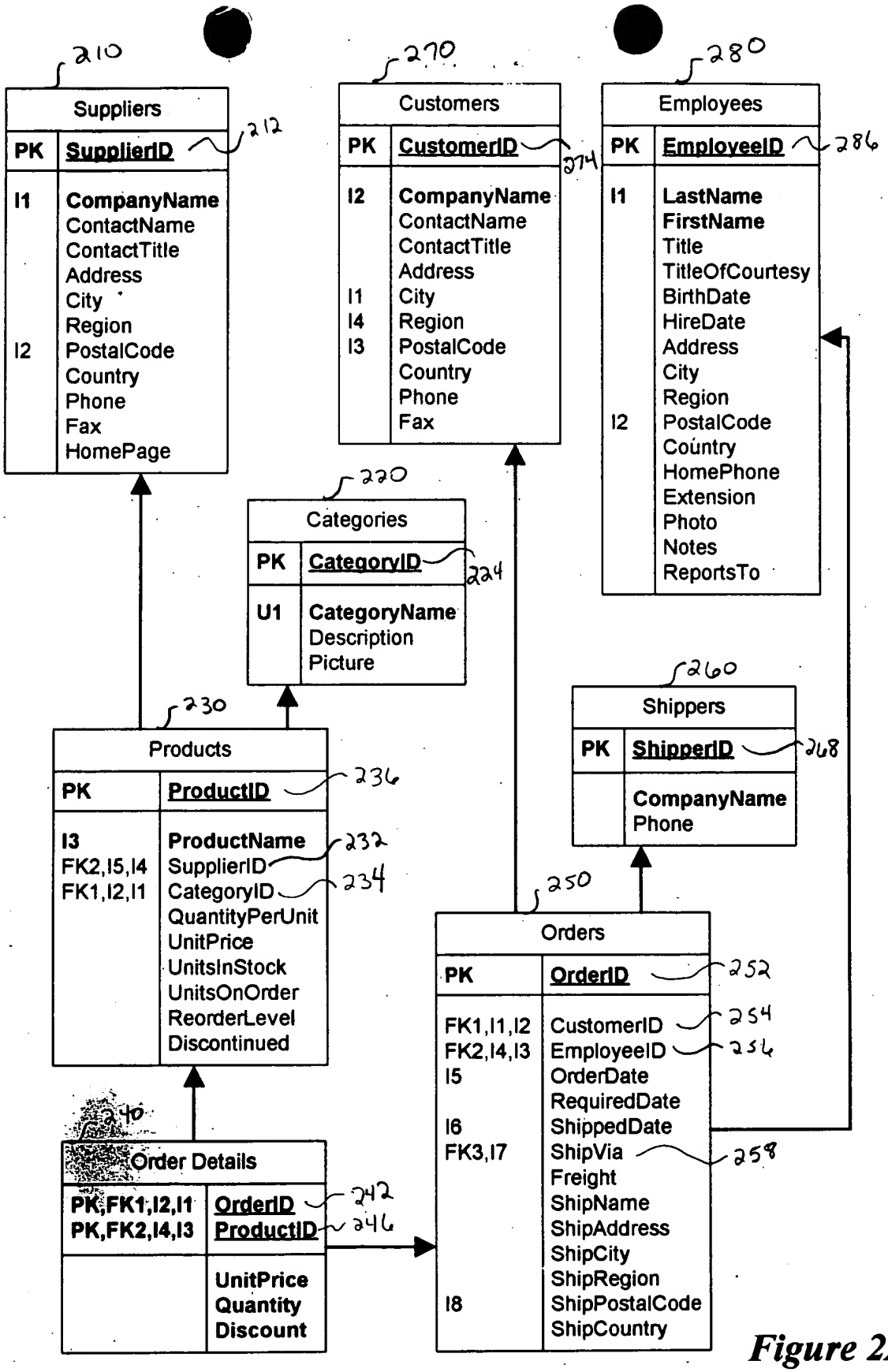

210
Suppliers
PK SupplierID
212
I1 CompanyName
ContactName
ContactTitle
Address
City
Region
I2 PostalCode
Country
Phone
Fax
HomePage
270
Customers
PK CustomerID
274
I2 CompanyName
ContactName
ContactTitle
Address
I1 City
I4 Region
I3 PostalCode
Country
Phone
Fax
280
Employees
PK EmployeeID
286
I1 LastName
FirstName
Title
TitleOfCourtesy
BirthDate
HireDate
Address
City
Region
I2 PostalCode
Country
HomePhone
Extension
Photo
Notes
ReportsTo
220
Categories
PK CategoryID
224
U1 CategoryName
Description
Picture
260
Shippers
PK ShipperID
268
CompanyName
Phone
230
Products
PK ProductID
236
I3 ProductName
232
FK2,I5,I4 SupplierID
FK1,I2,I1 CategoryID
234
QuantityPerUnit
UnitPrice
UnitsInStock
UnitsOnOrder
ReorderLevel
Discontinued
250
Orders
PK OrderID
252
FK1,I1,I2 CustomerID
254
FK2,I4,I3 EmployeeID
256
I5 OrderDate
RequiredDate
I6 ShippedDate
FK3,I7 ShipVia
258
Freight
ShipName
ShipAddress
ShipCity
ShipRegion
I8 ShipPostalCode
ShipCountry
240
Order Details
PK,FK1,I2,I1 OrderID
242
PK,FK2,I4,I3 ProductID
246
UnitPrice
Quantity
Discount

Figure 2A

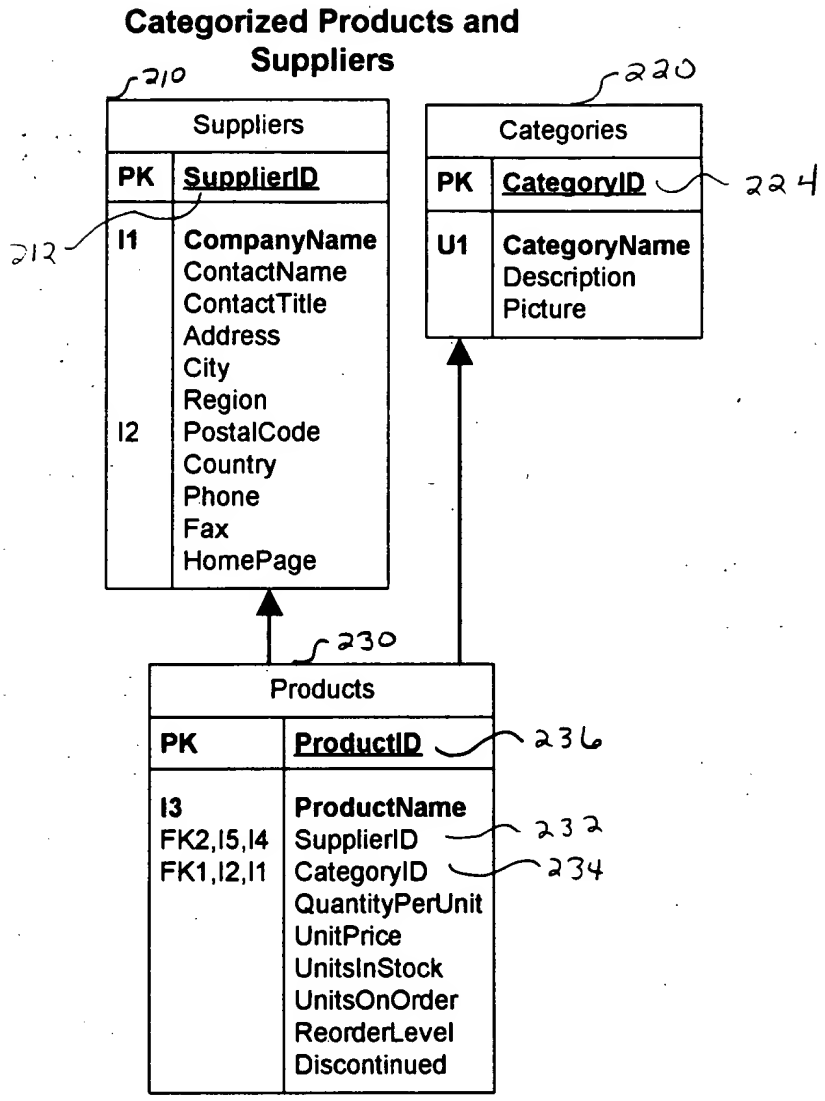

Categorized Products and Suppliers
210
Suppliers
PK
SupplierID
I1
CompanyName
ContactName
ContactTitle
Address
City
Region
I2
PostalCode
Country
Phone
Fax
HomePage
212
220
Categories
PK
CategoryID
224
U1
CategoryName
Description
Picture
230
Products
PK
ProductID
236
I3
ProductName
FK2,I5,I4
SupplierID
232
FK1,I2,I1
CategoryID
234
QuantityPerUnit
UnitPrice
UnitsInStock
UnitsOnOrder
ReorderLevel
Discontinued

Figure 2B

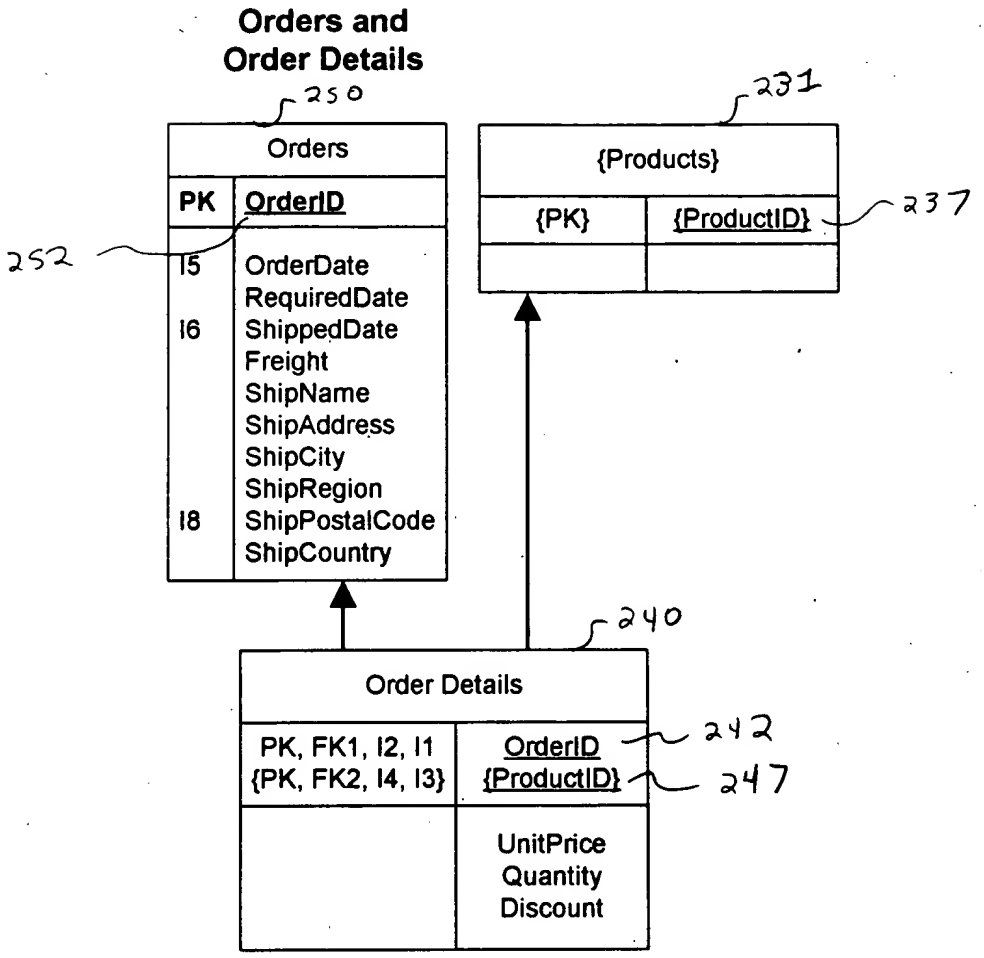

Orders and
Order Details
250
231
Orders
PK
OrderID
252
15
OrderDate
RequiredDate
16
ShippedDate
Freight
ShipName
ShipAddress
ShipCity
ShipRegion
18
ShipPostalCode
ShipCountry
{Products}
{PK}
{ProductID}
237
240
Order Details
PK, FK1, I2, I1
{PK, FK2, I4, I3}
OrderID
{ProductID}
242
247
UnitPrice
Quantity
Discount

Figure 2C

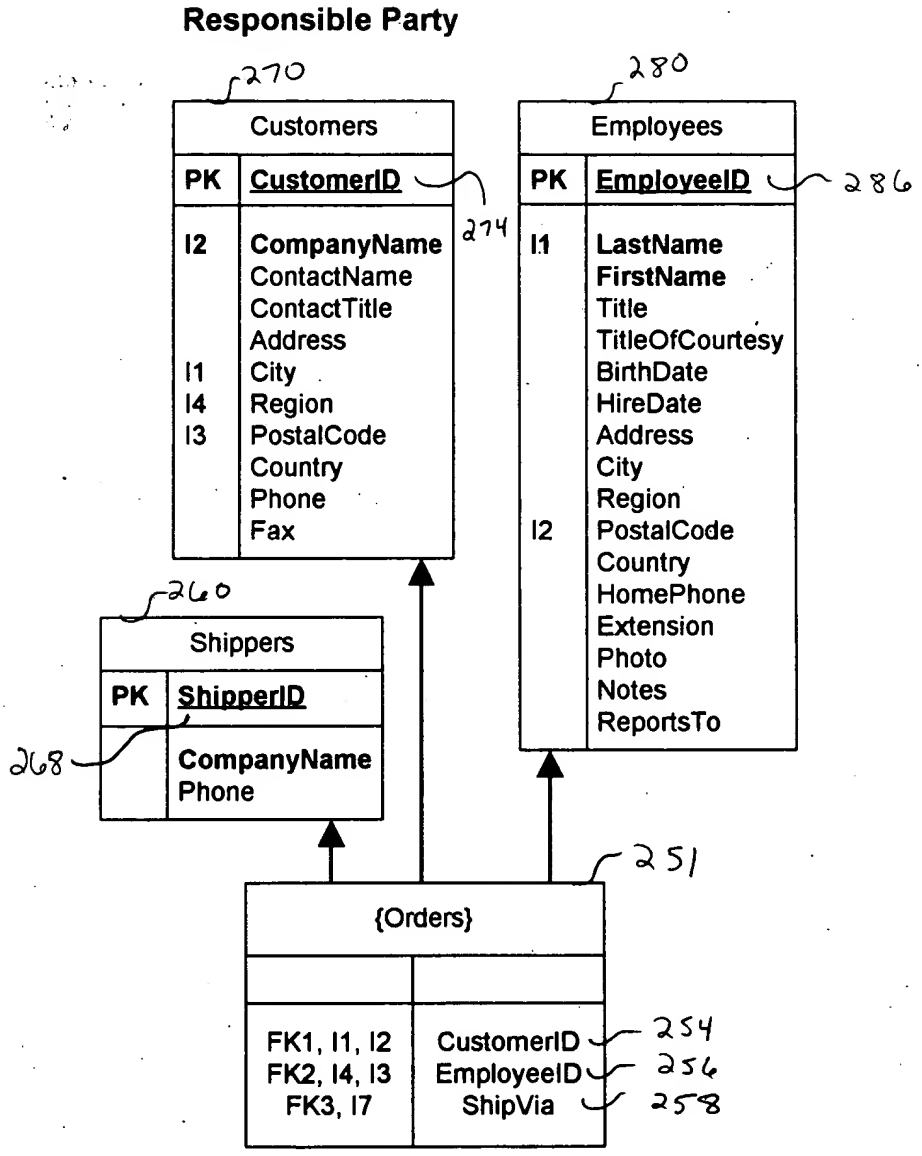

Responsible Party
270
Customers
PK
CustomerID
I2
CompanyName
ContactName
ContactTitle
Address
I1
City
I4
Region
I3
PostalCode
Country
Phone
Fax
274
280
Employees
PK
EmployeeID
286
I1
LastName
FirstName
Title
TitleOfCourtesy
BirthDate
HireDate
Address
City
Region
I2
PostalCode
Country
HomePhone
Extension
Photo
Notes
ReportsTo
260
Shippers
PK
ShipperID
268
CompanyName
Phone
251
{Orders}
FK1, I1, I2
FK2, I4, I3
FK3, I7
CustomerID
EmployeeID
ShipVia
254
256
258

Figure 2D

0087207 h90z0560

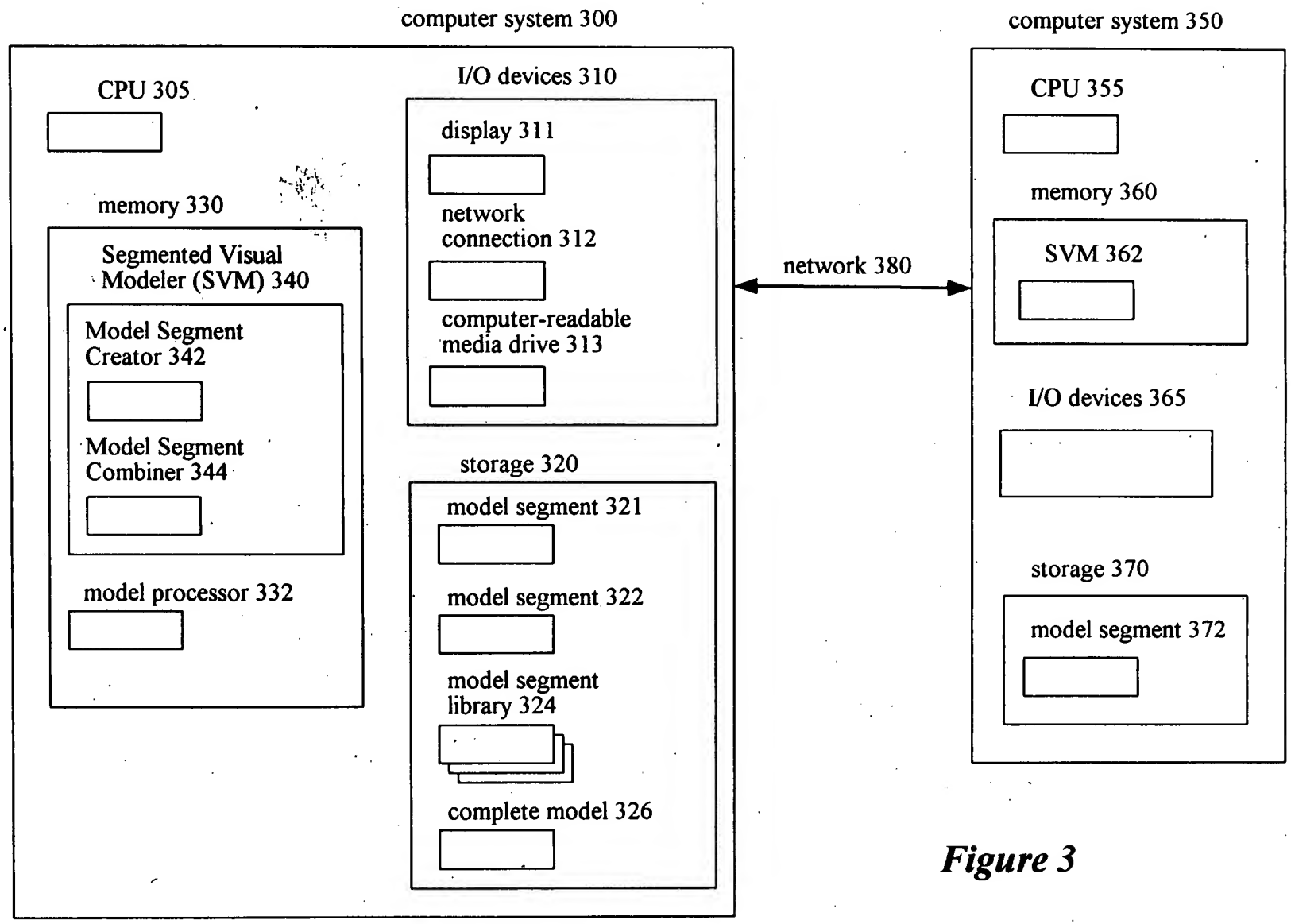
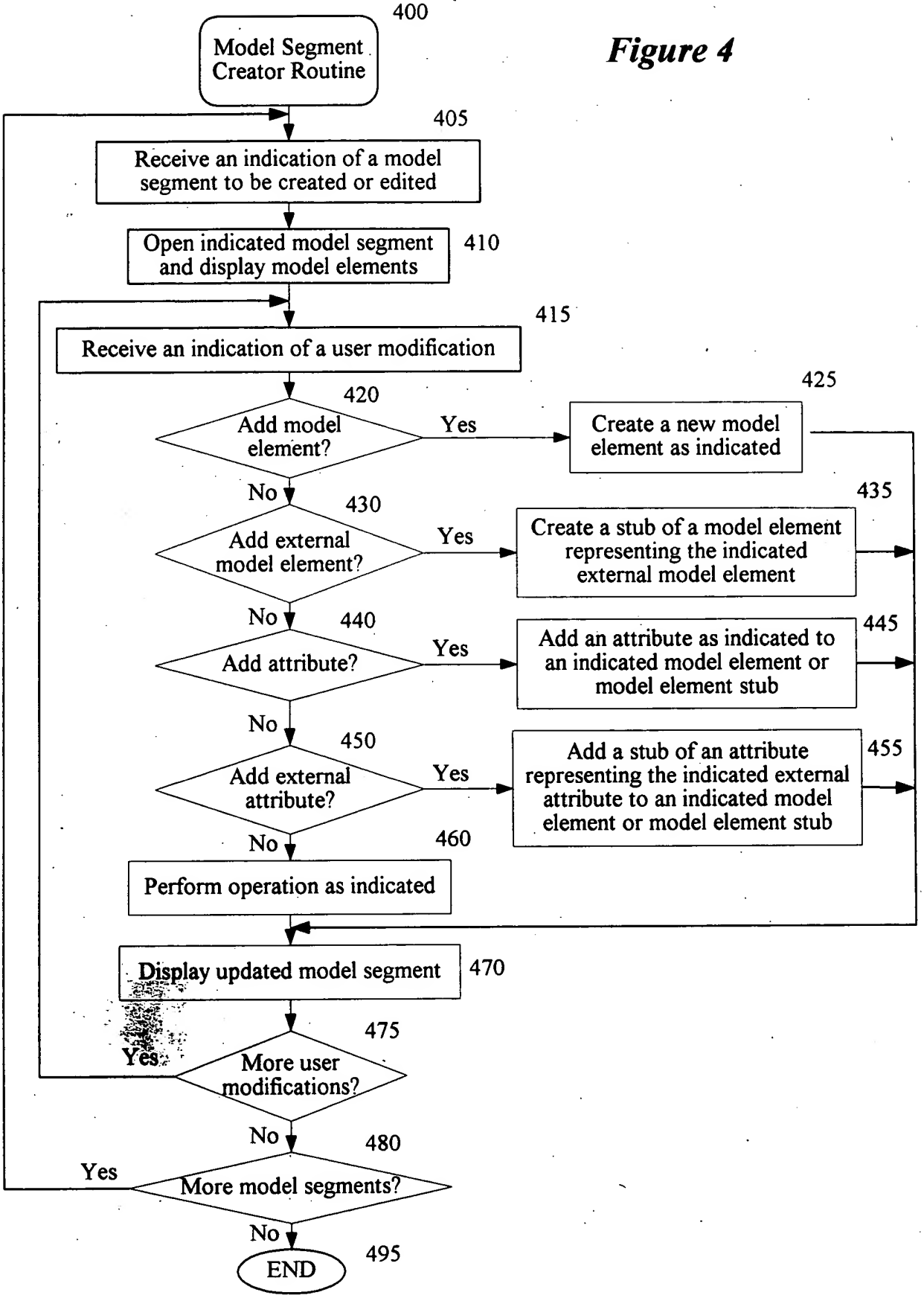


Figure 3

0081200 v1 600 2055 0

Figure 4



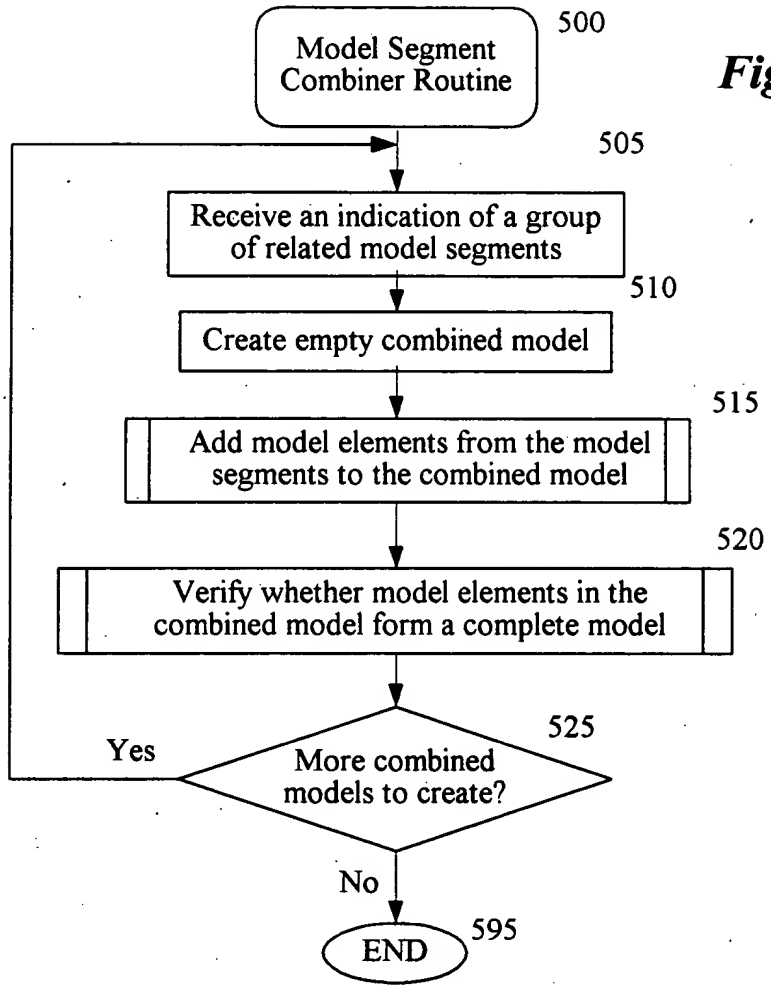

Model Segment Combiner Routine
500
505
Receive an indication of a group of related model segments
510
Create empty combined model
515
Add model elements from the model segments to the combined model
520
Verify whether model elements in the combined model form a complete model
525
More combined models to create?
Yes
No
END
595

Figure 5

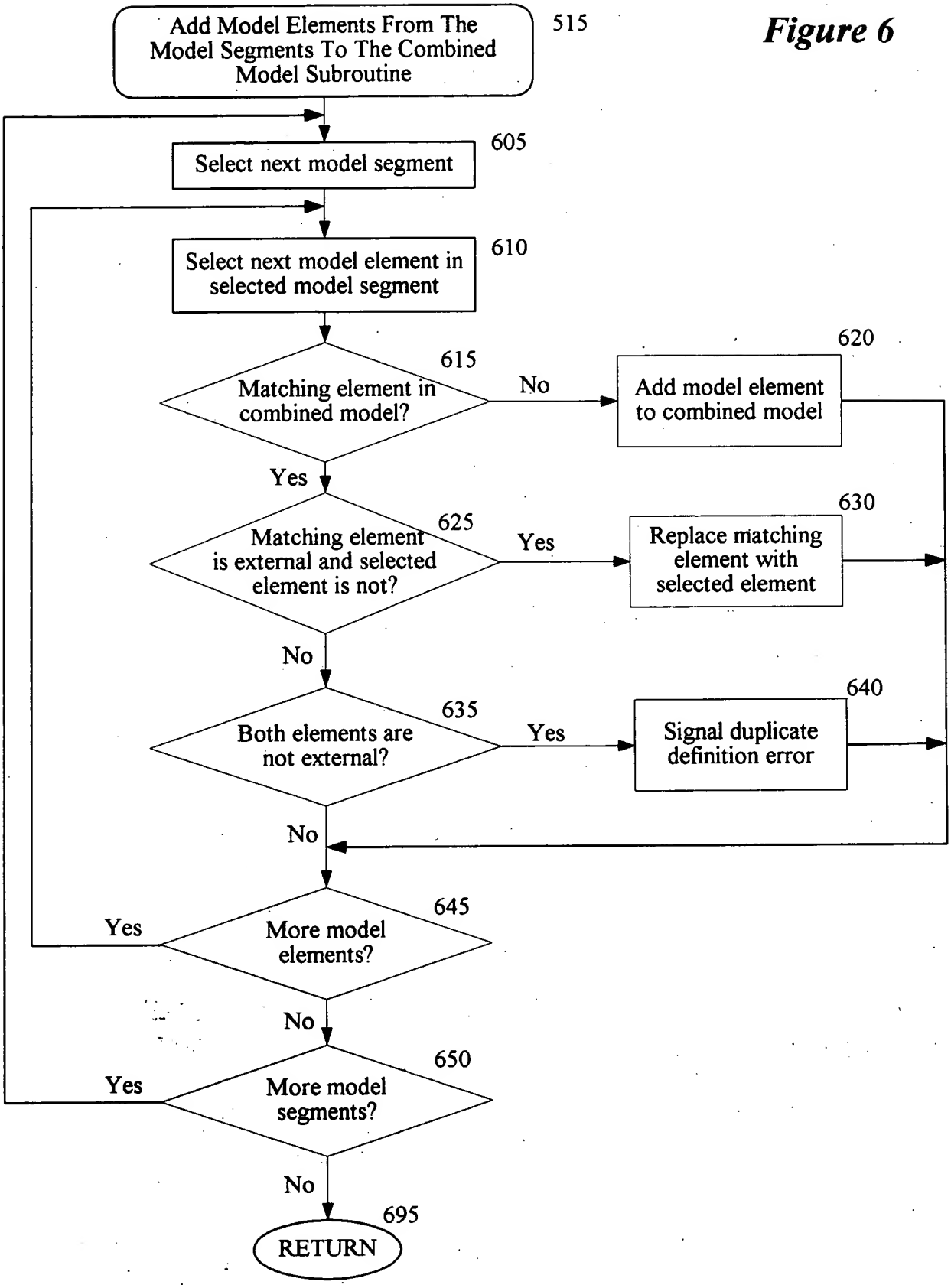

Add Model Elements From The Model Segments To The Combined Model Subroutine
515
Select next model segment
605
Select next model element in selected model segment
610
Matching element in combined model?
615
No
Add model element to combined model
620
Yes
Matching element is external and selected element is not?
625
Yes
Replace matching element with selected element
630
No
Both elements are not external?
635
Yes
Signal duplicate definition error
640
No
More model elements?
645
Yes
No
More model segments?
650
Yes
No
RETURN
695

Figure 6

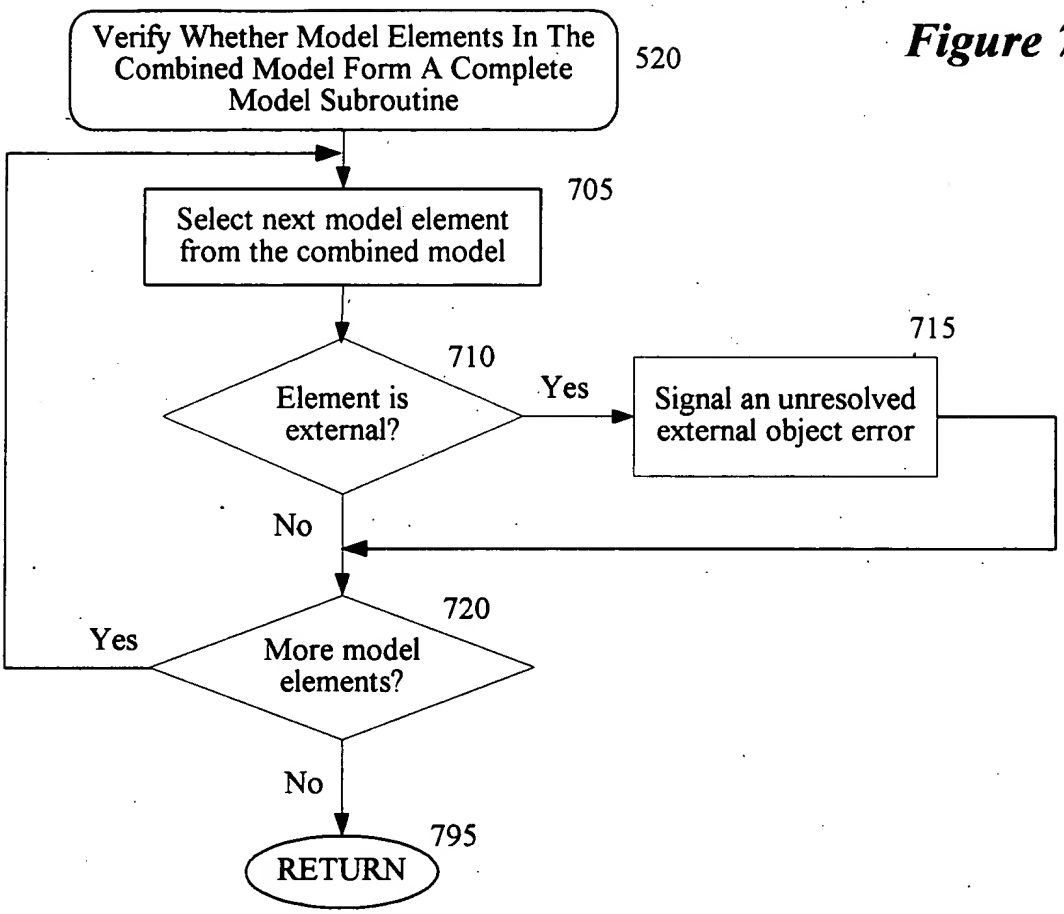

Verify Whether Model Elements In The Combined Model Form A Complete Model Subroutine
520
Select next model element from the combined model
705
Element is external?
710
Yes
Signal an unresolved external object error
715
No
More model elements?
720
Yes
No
RETURN
795

Figure 7

Certification Application System

Static Structure Diagram

Figure 8A

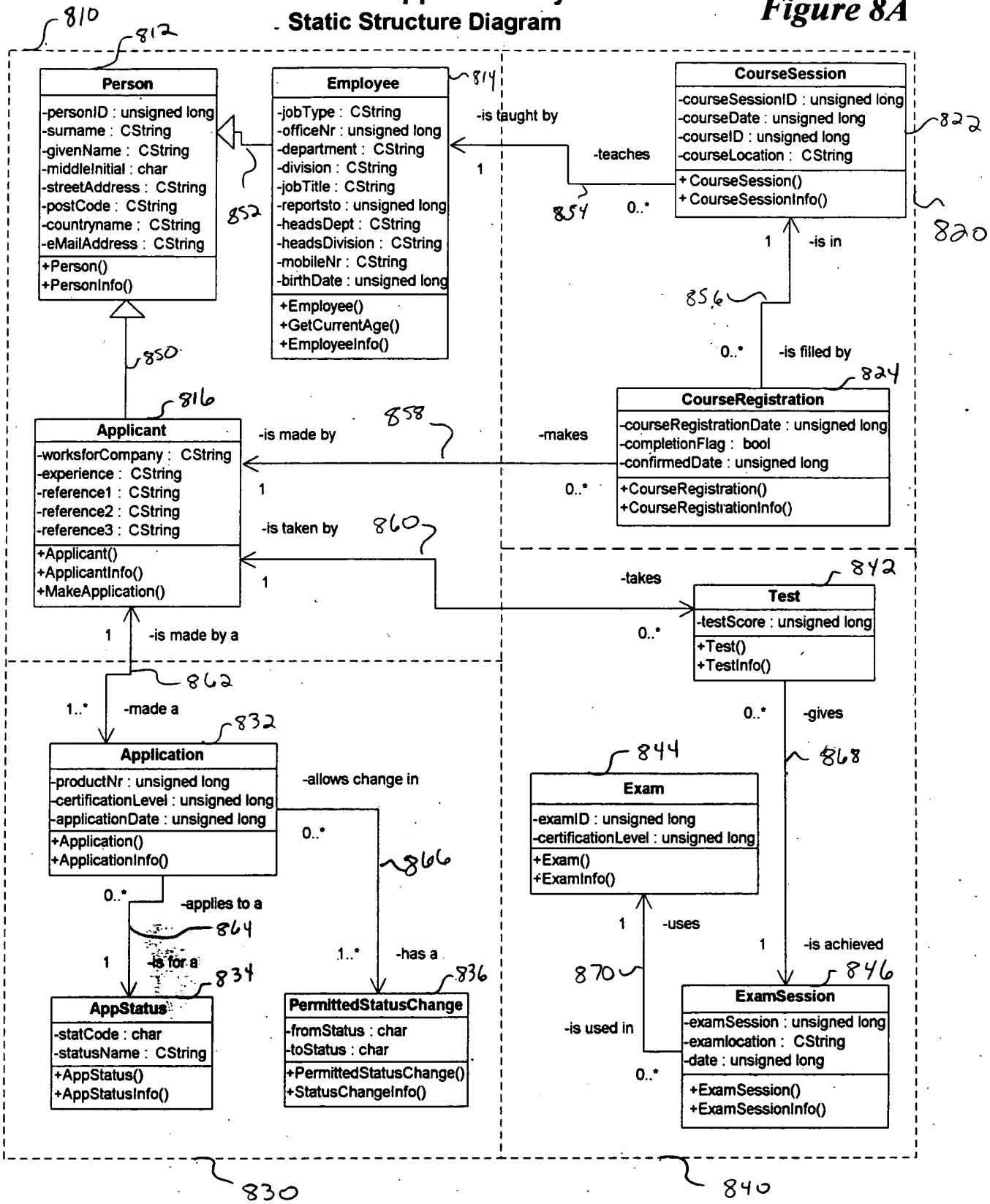


Figure 8B

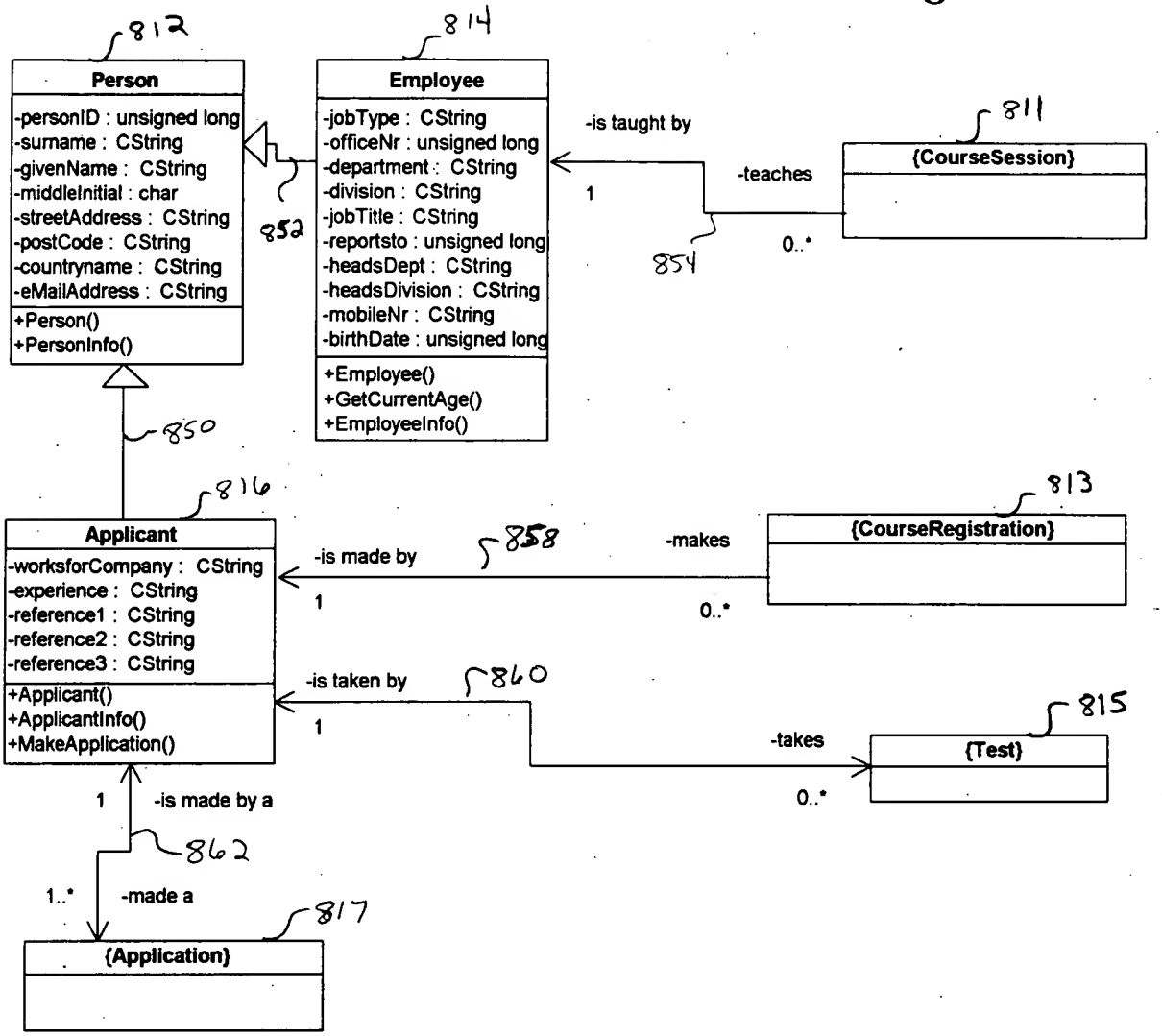

812
Person
-personID : unsigned long
-surname : CString
-givenName : CString
-middleInitial : char
-streetAddress : CString
-postCode : CString
-countryname : CString
-eMailAddress : CString
+Person()
+PersonInfo()
814
Employee
-jobType : CString
-officeNr : unsigned long
-department : CString
-division : CString
-jobTitle : CString
-reportsto : unsigned long
-headsDept : CString
-headsDivision : CString
-mobileNr : CString
-birthDate : unsigned long
+Employee()
+GetCurrentAge()
+EmployeeInfo()
852
-is taught by
1
-teaches
0..*
854
811
{CourseSession}
850
816
Applicant
-worksforCompany : CString
-experience : CString
-reference1 : CString
-reference2 : CString
-reference3 : CString
+Applicant()
+ApplicantInfo()
+MakeApplication()
858
-is made by
1
-makes
0..*
813
{CourseRegistration}
-is taken by
860
1
-takes
0..*
815
{Test}
1
-is made by a
862
1..*
-made a
817
{Application}

Figure 8C

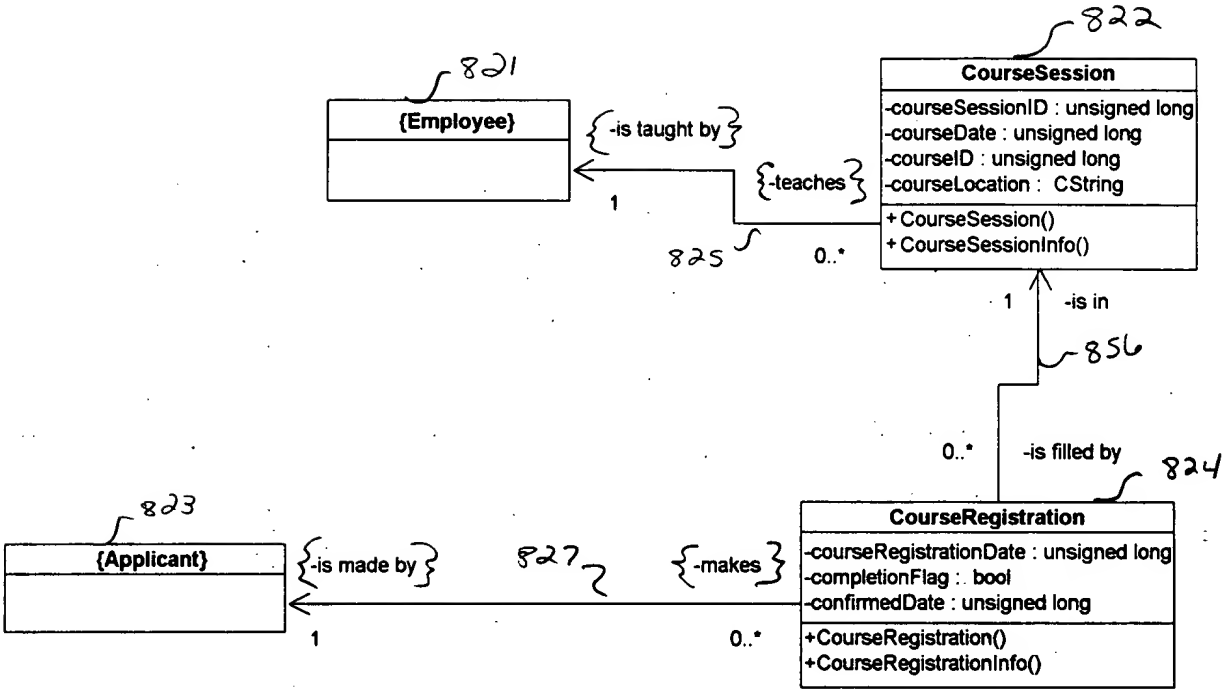


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Figure 8D

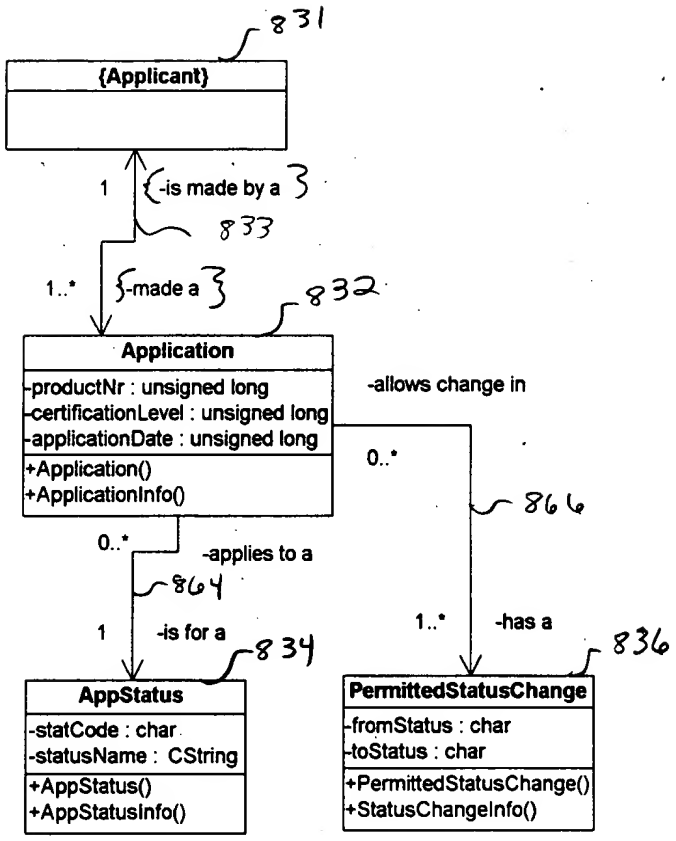
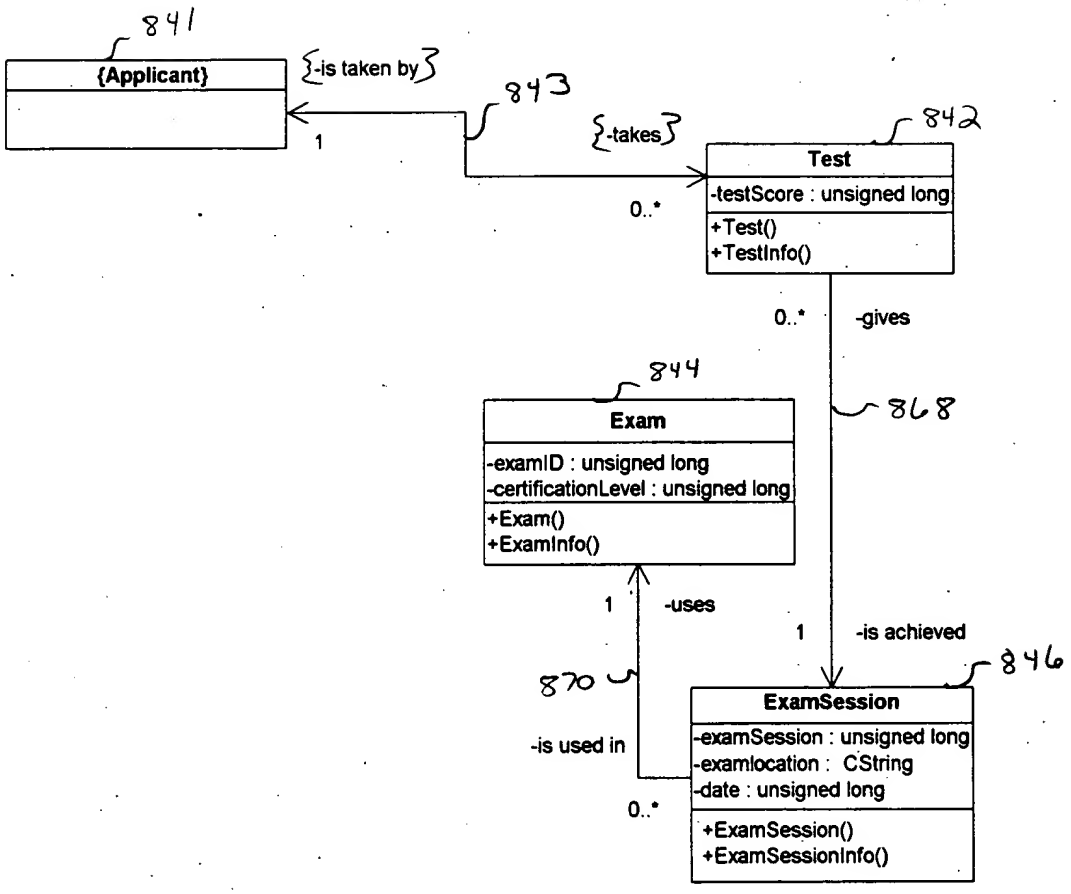

831
{Applicant}
1
-is made by a
833
1..*
-made a
832
Application
-productNr : unsigned long
-certificationLevel : unsigned long
-applicationDate : unsigned long
+Application()
+ApplicationInfo()
-allows change in
0..*
866
0..*
-applies to a
864
1
-is for a
834
AppStatus
-statCode : char
-statusName : CString
+AppStatus()
+AppStatusInfo()
1..*
-has a
836
PermittedStatusChange
-fromStatus : char
-toStatus : char
+PermittedStatusChange()
+StatusChangeInfo()

Figure 8E



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